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NOTICE OF ALLOWANCE AND FEE(S) DUE

22429 7590 05/07/2009 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITTE 300

ALEXANDRIA, VA 22314

EXAMINER
BAYARD, EMMANUEL
ART UNIT PAPER NUMBER
2611

DATE MAILED: 05/07/2009

APPLICATION NO. FILNO DATE HEST NAMED INVENTOR ATTORNEY DOCKET NO. CONFERMATION NO. 10/814.223 04/01/2004 Houns-Jac Im 123/05/9-05/043/66 54/03

TITLE OF INVENTION: FINGER FOR SYMBOL-RATE WEIGHTING USING IN SMART ANTENNA SYSTEM, AND ITS APPLICATION FOR DEMODULATION APPARATUS AND METHOD

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	08/07/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION NO THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where

indicated unless corrects maintenance fee notifica	ed belôw or directed oth tions.	ng the Patent, advance on nerwise in Block 1, by (rders and notification a) specifying a new o	corres	pondence address:	and/o	(b) indicating a sepa	ırate "F	EE ADDRESS" for
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)				Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.					
22429	7590 05/07				Cer	tificate	of Mailing or Trans	missior	n
1700 DIAGONA SUITE 300		BERNER, LLP		I her State addr trans	reby certify that the es Postal Service vessed to the Mail smitted to the USP	is Fec(th sul Stop TO (57	s) Transmittal is being ficient postage for firs ISSUE FEE address I) 273-2885, on the d	deposi t class above, ate indi	ited with the United mail in an envelope or being facsimile icated below.
ALEXANDRIA	, VA 22314								(Depositor's name)
									(Signature)
									(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVEN	TOR		ATTO	RNEY DOCKET NO.	CON	FIRMATION NO.
10/814,223	04/01/2004		Heung-Jac Im			12	3059-05004366		5403
TITLE OF INVENTION DEMODULATION APP		BOL-RATE WEIGHTE OD	NG USING IN SMA	RT /	ANTENNA SYST	EM, A	ND ITS APPLICATI	ON FO)R
APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE I	OUE	PREV. PAID ISSU	SFEE	TOTAL FEE(S) DUE	\perp	DATE DUE
nonprovisional	YES	\$755	\$300		\$0		\$1055		08/07/2009
EXAM	IINER	ART UNIT	CLASS-SUBCLASS	ss					
BAYARD, E		2611	375-147000						
1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTOSBI 222) attached. The Address' indication for "Fee Address" Indication form PTOSBI 47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.			2. For printing on the pasent front page, list (1) the names of up to 3 registered pasent attorneys or agents OR, alternatively. (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to listed, no name will be printed. [1] the printed						
(A) NAME OF ASSI	less an assignee is ident h in 37 CFR 3.11. Comp GNEE	ified below, no assignee pletion of this form is NO	data will appear on t T a substitute for filin (B) RESIDENCE: (6	the page and CITY	atent. If an assign assignment. and STATE OR C	OUNT	'RY)		
Please check the appropr	iate assignee category or	categories (will not be p	rinted on the patent):		Individual Co	rporati	on or other private gro	oup enti	ty Government
4a. The following fee(s)	are submitted:	4			se first reapply a	y prev	lously paid issue fee	shown :	above)
Issue Fee	☐ A check is enclosed. ☐ Payment by credit card. Form PTO-2038 is attached.								
☐ Publication Fee (No small entity discount permitted) ☐ Advance Order - # of Copies			The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).						
5. Change in Entity Sta	tus (from status indicate	d above)	overpayment, to	ьеро	Sit Account Numb		(enclose a	1 extra	copy of this form).
	s SMALL ENTITY state		☐ b. Applicant is no	o lon	ger claiming SMA	LEN	ITTY status. See 37 Cl	R 1.27	^r (g)(2).
NOTE: The Issue Fee an interest as shown by the	d Publication Fee (if req records of the United Sta	uired) will not be accepte ites Patent and Trademark	d from anyone other to Office.	han t	he applicant; a regi	stered.	attorney or agent; or th	ie assigi	nee or other party in
Authorized Signature			Date						
Typed or printed name			Registration No.						
This collection of inform an application. Confiden submitting the completes this form and/or suggests Box 1450, Alexandria, V Alexandria, Virginia 223	nation is required by 37 C tiality is governed by 35 d application form to the ions for reducing this but 'irginia 22313-1450. DC k13-1450.	CFR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR	on is required to obtain 1.14. This collection of depending upon the e Chief Information C COMPLETED FORM	n or r is est indiv Office IS TO	etain a benefit by t imated to take 12 idual case. Any r, U.S. Patent and D THIS ADDRESS	he pub minuter mmen Trader i. SEN	tic which is to file (and to complete, including s on the amount of tin nark Office, U.S. Dep D TO: Commissioner	by the g gathe ne you artment for Pate	USPTO to process) ering, preparing, and require to complete of Commerce, P.O. ents, P.O. Box 1450,

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DATE MAILED: 05/07/2009

	APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
	10/814,223	04/01/2004	Heung-Jae Im	123059-05004366	5403		
	22429 75	90 05/07/2009		EXAM	INER		
	LOWE HAUPTN	MAN HAM & BERN	BAYARD, EMMANUEL				
1700 DIAGONAL ROAD				ART UNIT	PAPER NUMBER		
SUITE 300 ALEXANDRIA, VA 22314				2611			

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1162 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1162 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)				
10/814,223	IM, HEUNG-JAE				
Examiner	Art Unit				
Emmanuel Bayard	2611				

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence addressAll claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included
herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS
NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative
of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to 3/18/09.
- 2. The allowed claim(s) is/are 1-25 and 28.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a)

 All b)

 Some* c)

 None of the:
 - 1. A Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____
 - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) Thereto or 2) to Paper No./Mail Date
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

 DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2.
 Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08),
- Examiner's Comment Regarding Requirement for Deposi of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date .
- 7. Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. 🔲 Other _____.

DETAILED ACTION

This is in response to amendment filed on 3/18/09 in which claims 1-25 and 28 are pending. The applicant's amendments have been fully considered therefore this case is in condition for allowance. In addition the pending claims have been renumbered as 1-26, respectively.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or
additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR
 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the
payment of the issue fee.

The application has been amended as follows: In claim 26, line 3 after signal ---said fingers--- has been inserted.

Allowable Subject Matter

- The following is an examiner's statement of reasons for allowance: The prior arts of record fail to anticipate or render obvious the limitation as recited in all the independent claims and excluding "signal, carrier wave and so forth...".
- and Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the

Art Unit: 2611

issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

- The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- 4. Sindhushayana U.S. Pub No 20070127605 A1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016.

The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571 272 3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

5/6/2009

/Emmanuel Bayard/

Primary Examiner, Art Unit 2611